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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/029,319

10/17/2001

William N. Parto

2001-0095-1

4334

7590

12/03/2002

Cymer, Inc.
Legal Department - MS/1-2A
16750 Via Del Campo Court
San Diego, CA 92127-1712

EXAMINER

MONBLEAU, DAVIENNE N

ART UNIT

PAPER NUMBER

2828

DATE MAILED: 12/03/2002

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/029,319

Applicant(s)

CYMER, I NC

Examiner

Davienne Monbleau

Art Unit

2828

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 07 October 2002.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6 and 9-19 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-6 and 9-16 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers


- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 17 October 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☒ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) 6.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.


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DETAILED ACTION

Information Disclosure Statement

The IDS filed on 10/15/02 has been acknowledged and a signed copy of the PTO-1449 is attached herein.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The changes made to 35 U.S.C. 102(e) by the American Inventors Protection Act of 1999 (AIPA) do not apply to the examination of this application as the application being examined was not (1) filed on or after November 29, 2000, or (2) voluntarily published under 35 U.S.C. 122(b). Therefore, this application is examined under 35 U.S.C. 102(e) prior to the amendment by the AIPA (pre-AIPA 35 U.S.C. 102(e)).

Claims 1-6, 9, 12, 15 and 19 are rejected under 35 U.S.C. 102(e) as being anticipate by Hofmann et al. (U.S. Patent No. 6,034,984). Regarding Claim 1, Hofmann et al. disclose in Figure 1b an electric discharge laser comprising a laser chamber (102), a laser gas (108), electrodes (118 and 120), a discharge region (122), and a tangential fan (140). It is inherent that there is a pulse power source. Hofmann et al. further disclose in Figure 2a that said fan comprises a plurality of blade members (214) and a plurality of hub members (212) defining fan blade segments (210), and in column 5 lines 6-56 that said blade members minimize adverse

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effects in said discharge region of reflection of discharge generated acoustic shock waves from said blade members. Hofmann further teaches in column 7 lines 37-42 a double helix pattern. Regarding Claim 8, Hofmann et al. disclose in column 6 lines 5-7 that said fan has 18 sections, and hence 18 hub members.

Regarding Claim 2, Hofmann et al. disclose in Claim 3 an odd number of blade members.

Regarding Claim 3, Hofmann et al. disclose in Claim 4 that said blade member has an airfoil cross-sectional shape.

Regarding Claim 4, Hofmann et al. disclose in Claim 5, that said hub members are disposed transversely relative to said rotation axis, and that the number and axial placement of said hub members controls the natural frequency of bending mode vibration of said fan.

Regarding Claim 5, Hofmann et al. disclose in Claim 6 that the natural frequency of bending mode vibration of said fan is greater than twice the rotation frequency of said fan.

Regarding Claim 6, Hofmann et al. disclose in Claim 7 the material of said fan.

Regarding Claim 9, Hofmann et al. disclose in Figure 4f that said blade members have a cross section corresponding to an arc of a circle.

Regarding Claim 12, Hofmann et al. disclose in column 5 line 66 to column 6 line 4 that said blade members in adjacent sections are positioned asymmetrically.

Regarding Claim 15, Hofmann et al. disclose in Figure 4f that said blade members have first and second circular arc cross sections defining a convex surface and a concave surface, respectively.

Regarding Claim 19, Hofmann et al. disclose in Figure 3c that said blade elements comprise two cylindrical surfaces (320), and a pointed leading edge.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

Claims 10, 11, 13, 14 and 16-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Hofmann et al. (U.S. Patent No. 6,034,984). Regarding Claim 10, Hofmann et al. does not teach the radii of the circle cross-section. However, it would have been obvious to one of ordinary skill in the art at the time of the invention to use specific radii since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. In re Boesch, 617 F.2d 272, 205 USPQ 215 (CCPA 1980).

Regarding Claim 11, Hofmann et al. does not teach that said blades are positioned asymmetrically within each section. However, Hofmann et al. does teach in column 5 to column 6 that asymmetrical blade configurations minimize in-phase reflection of shock energy. Therefore, it would have been obvious to one of ordinary skill in the art at the time of the

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invention to use asymmetrically positioned blade members, as taught by Hofmann et al., to reduce laser output energy fluctuations.

Regarding Claim 13, see discussion on Claims 7 and 11.

Regarding Claim 14, see discussion on Claim 12.

Regarding Claims 16 and 17, Hofmann et al. does not teach the respective radii and origin of said circle cross-sections. It would have been obvious to one of ordinary skill in the art at the time of the invention to use specific radii since it has been held that discovering an optimum value of a result effective variable involves only routine skill in the art. In re Boesch, 617 F.2d 272, 205 USPQ 215 (CCPA 1980).

Regarding Claim 18, see discussion on Claim 19.

Response to Arguments

Applicant's arguments filed 10/7/02 have been fully considered but they are not persuasive. The Applicant argues that Hofmann et al. do not teach a double helix pattern. Hofmann et al. teach in column 7 lines 37-42 that a twisted blade fan structure (260) can include alternately reversed adjacent clockwise and counterclockwise substantially helical twists, to cancel longitudinal aerodynamic effects. This creates a double helix pattern as claimed.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after

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the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Davienne Monbleau whose telephone number is 703-306-5803. The examiner can normally be reached on Mon-Fri 8:00 am to 4:30 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Paul Ip can be reached on 703-308-3098. The fax phone numbers for the organization where this application or proceeding is assigned are 703-308-7722 for regular communications and 703-308-7722 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-0956.

Davienne Monbleau

DNM
November 21, 2002

Paul Ip

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